

Claims

1. Method for transfer of an IP packet over a path from a sender (CN 13) over a radio access network (BS 6, HA 15, FA 11) to a mobile host (MS 2),

characterized in that, when a home agent (HA 15) receives an incoming data packet determined for a mobile host (MS 2) with a destination address (MS2-address 137.21.16.5), the home agent (HA 15) examines if there is a match between the destination address (MS2-address: 137.21.16.5) of the packet and a subnetwork address (FA 11-address: 137.21.16.0) of a foreign agent (FA 11) listed in a list of subnetwork addresses (137.21.16.0; 137.22.25.0) stored at the home agent (HA),

wherein, if there is a match between the destination address (MS2-address: 137.21.16.5) and a subnetwork address (FA 11-address: 137.21.16.0) of a foreign agent, the home agent examines whether a preconfigured path from the home agent (HA 15) to this foreign agent exists and wherein the home agent (HA 15) sends the packet to this foreign agent (FA 11) on this preconfigured label switched path (37) if a label switched path (37) to this foreign agent exists.

2. Method according to claim 1, wherein the home agent (HA 15) sends the packet to this foreign agent (FA 11) on this preconfigured label switched path (37) by sending the packet over a port of a forwarding interface (eth0) of the home agent (HA 15) which port is used for the path with

10

this path number (37).

3. Method according to any of the preceding claims, wherein the home agent (HA 15) examines if there is a match  
5 between the destination address (MS2-address: 137.21.16.5) of the packet and a subnetwork address (FA 11-address: 137.21.16.0) of a foreign agent (FA 11) only if there is an entry (MS2-address: 137.21.16.5) in a binding cache of the home agent (HA 15) which entry corresponds to the  
10 destination address (MS2-address: 137.21.16.5) of the incoming packet.
4. Method according to any of the preceding claims, wherein a  
15 handover of a mobile host (MS1) from one foreign agent to an other foreign agent is done without creating or modifying a path between the foreign agent and a home agent of this mobile host.
5. Method according to any of the preceding claims, wherein  
20 the path (37) is a preconfigured, statically administered, multipurpose label switched path.
6. Method according to any of the preceding claims, wherein  
25 the functional entities of mobile IP and multipurpose label switching MPLS are co-located but not correlated in a foreign agent (FA 11).
7. Method according to any of the preceding claims, wherein a  
30 foreign agent (FA 11) and a home agent (HA 15) are packet switched nodes of an IP network.

Empf.zeit: 19/04/2004 17:49

Empf.nr.: 237 P.006

8. Home agent (HA 15),

characterized in that it comprises

-a memory containing a list of subnetwork addresses  
(137.21.16.0; 137.22.25.0) of foreign agents,

5 - a comparing means for comparing the destination address  
of an incoming data packet determined for a mobile host  
(MS2) with stored subnetwork addresses (137.21.16.0;  
137.22.25.0) of foreign agents (FA 11, FA 12) for  
determining the foreign agent (FA 11) to which the packet  
10 is to be sent,

-a means for determining a path (37) for transmission of  
the packet to the foreign agent (FA 11) by comparing the  
determined foreign agent (FA 11) address (137.21.16.0)  
with stored addresses (137.21.16.0; 137.22.25.0) of  
15 foreign agents (FA 11, FA 12), between which foreign  
agents (FA 11, FA 12) and the home agent (HA 15) paths  
(37, 62) exist,

-an interface (eth0) for transmitting a packet to a  
determined foreign agent (FA 11) on a determined,  
20 preconfigured path (37).